

411. ADVANCED CONCEPT TECHNOLOGY DEMONSTRATIONS

a. Background. An ACTD is an integrating effort to assemble and demonstrate a significant new military capability, based on maturing advanced technologies, in a realistic environment, to clearly establish military utility. The Deputy Undersecretary of Defense for Advanced Technology (DUSD/AT) must approve a new-start ACTD by issuing an approval memorandum. Each ACTD is assigned a sponsor, typically a unified command, which also is the ultimate user of the system or capability. A program manager develops the ACTD, usually through use of the integrated product team (IPT) concept. The sponsor provides funding, but also conducts the demonstration(s) to show operational utility and system integrity. Following the demonstration(s), and depending on their success, an ACTD may transition to a formal acquisition program at the appropriate milestone; may be produced in small quantities and introduced to the fleet; or it may be shelved. In any case, the original system or capability remains funded and operational for 2 years, available to the warfighter.

b. ACTD Working Group. The four operational test agencies (OTA) have formed an ACTD working group which provides coordination for OTA participation in ACTDs. They track the status of all approved ACTDs, monitor the evolving ACTD process, make recommendations for OTA participation (many will require joint participation), interface with DUSD/AT and DOT&E, and brief the OTA commanders as necessary. Note that while DOT&E maintains a keen interest in ACTDs, they are not oversight programs.

c. COMOPTEVFOR Participation. Many ACTDs will have little or no Navy interest, while a few may be developing an important new capability for the fleet. COMOPTEVFOR, in conjunction with the ACTD working group, will determine which ACTDs merit our attention and assignment of an OTD. We must be discerning, in view of our limited manpower and growing workload. We have already been involved in several ACTDs, and this involvement is expected to continue. Since ACTDs are not formal acquisition, we have no official mandate for participation in the process. But, given that ACTDs may eventually transition to formal acquisition and the rigors of OT, our early involvement in selected ACTDs can be critical to rapid development and deployment to the fleet. Selected ACTDs, as approved by COMOPTEVFOR, will be assigned an OTD, and will receive an appropriate level of attention. This level could well exceed that normally expended on a formal acquisition program.

d. Documentation. Because an ACTD is not a formal acquisition program, it will not have the traditional DoD and SECNAV documentation. Each ACTD is required to have a management plan, which is basically an agreement between the developer and sponsor. Included should be an overview of the ACTD, a schedule of planned events and demonstrations, programmatic and organizational details, funding information, and a description of the residual operational capability expected upon completion of the demonstration(s). There may be an ORD, or requirements may be incorporated in the management plan, or requirements may not be documented at all. Many ACTD sponsors have developed a concept of operations, which addresses theater level interoperability, compatibility, and integration issues.

e. Requirements. As ACTDs are by nature technology demonstrations, most will not have a formal set of performance requirements. The demonstration is often used to quantify system capabilities and define requirements. If there are no thresholds or objectives, do not “shake the tree” for them. Simply ascertain what the ACTD is meant to do and determine what COIs, MOEs/MOPs are needed to reflect those capabilities. Also, ask yourself how the ACTD could be used. Brainstorm. Bring your ideas before the IPT and get agreement, then do your test planning. Our participation in ACTDs should be focused on accomplishment of the following:

- Provide a sound operational test methodology, complete with COIs, MOEs, and MOPs.
- Assist in developing COIs and MOEs/MOSs.
- Ensure that suitability is not inadvertently overlooked in the demonstration(s).
- Assess and document the demonstration results, so that transition to formal acquisition will be as easy as possible.
- Make recommendations for system improvement.

- Identify strengths and weaknesses observed.

f. COIs, MOEs, and MOSSs. We prefer that COIs be documented. If involved early enough, we can arrange to include them in the management plan. If not, then they should be documented in some other way, either in an MOA with the sponsor and program manager, or possibly in a TEMP-like document called the Demonstration and Evaluation Master Plan (DEMP (See chapter 6, paragraph 603c for information on ACTD test plans.)

g. Embedded Programs Within an ACTD. An ACTD may include any number of sub-level programs, some of which may be other ACTDs of advanced technology demonstrators, or even a formal acquisition program. For example, the Mountain Top ACTD includes Combined Engagement Capability, a formal acquisition program, as a sub-element.

h. CNO Data Base. Selected ACTDs are just as important to our Navy and our business at OPTEVFOR as formal acquisition programs. Therefore, they will be assigned an OTD and their progress will be tracked in the CNO Data Base. Because a Navy TEIN will not have been assigned, we will assign a local 3000 series TEIN for tracking purposes.

i. More Information. For ACTD modeling and simulation, see this chapter, paragraph 417. For contractor participation, see chapter 1, paragraph 104j(5). For reporting procedures, see chapter 8, paragraph 810.